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# VALUE ADDED TAX (VAT): THE IMPACT ON THE CHAIN PRODUCER - PROCESSOR - TRADER - CONSUMER - STATE BUDGET

Mircea TOMA<sup>1</sup>

**Abstract:** *Counteracting the crisis, theoretically but also practically cannot ignore the direct and consequential effects (collateral) of taxes and contributions due to the state budget and distribution of profits, on the chain: Financial Institutions ⇒ Suppliers of inputs ⇒ Agricultural producers ⇒ Wholesalers ⇒ Processing industry ⇒ En – detail traders ⇒ Consumer ⇒ State budget. Solutions require transparency, solidarity, equity, social justice in the distribution of efforts and usufruct (profit) on all chain participants to achieve useful goods and services useful for the human society. An orderly adjustment of tax and contribution system may lead to the adoption of those measures to stimulate domestic consumption, domestic output growth and rotation speed of capital, reducing the budget deficit, uncontrolled growth of prices, inflation and unemployment, in a word of imbalances in economic life. To assess the impact of VAT on the chain was started from two hypotheses : rethinking the VAT quota level on the chain and determine and regularization of the VAT, by entitling the right to the users of agricultural production to deduct VAT from the price paid to individual producers (associated )namely calculating VAT from 100 price paid . The results are concretized in: increasing revenues ( about 2.4 billion / year), reducing the public institutions spending on goods and services bearing VAT by 20% (about 200 million Euro/ year ), reduction of VAT refunds from the budget, reducing the gap between theoretical and potential VAT collected from 42 % (49.5 % ) to 24%, by increasing the collection from 58% (50.5 %) to 76 %, concentration collecting VAT chargeable (76,22 %) from merchants and diminishing the amount of payment by the economic operators on channel.*

**Keywords :** VAT, chain, VAT quota, tax evasion, state budget

## INTRODUCTION

**Value added tax in the world:** Value added tax was first applied in France (1957) and, from 1 January 1970, was adopted by the countries of the former Common Market (now the European Union) to avoid taxation in "cascade" as was the tax on turnover. (ICM). VAT gradually spread across the all economy domains and was adopted by most countries - 63 states, becoming the main source of budget revenues - over 40%. Denmark was the first country that used VAT, after France. The following was Germany (1968), Sweden (1969) and Norway (1970). The United States of America do not use VAT.

Today, all EU countries are obliged to use VAT to comply with the Directive (2006/112) of the European Commission.

**VAT in Romania vs. EU:** VAT is, for the 63 countries that apply it, the main source of revenue to the budget, including Romania, and as a source for reducing the effects of the financial crisis triggered in 2008. Romania, with a VAT rate of 24% ranks third in the EU, after Hungary (27%) and Denmark (25%). After Romania, follows Finland by 22%. A group of three countries have 21% and 20% 7 countries. The lowest rates have Cyprus and Luxembourg, 15% and Greece with 13%, reduced from 22%.

**Collection rate:** According to European Commission study, Romania has lost 10.3 billion Euros of VAT in 2011, which represents 7.86% of GDP achieved, 131.1 billion Euros, compared with 1.5% at GDP of 12669 billion Euros at the level of the Union, occupying first place. Romania collects only 58% of potential VAT collected to the state budget, compared with Greece which has a collection of 70%, Slovakia 72%, Italy 75%, but Sweden has 97% and the Netherlands 95%.

**The collecting gap** in the VAT domain at the level of the **EU countries is 17%** in the period 2000 – 2011 and **only 42% in Romania.**

**Tax evasion:** The current crisis is accentuated by increasing tax evasion manifested by "evasion of tax liabilities", namely the action to appropriate by fraud of the economic operators by cashing, failure to record and use for personal the amounts due to state. Evasion was estimated at

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3.5-4% (20 billion lei) by the Romanian Fiscal Commission. The 10.3 billion Euros represent about 80% of VAT revenue from the 2014 budget (57 billion lei: 4.45 lei / euro).

## MATERIAL AND METHOD

The research method used is the qualitative analysis by studying the fiscal legislation of the Common Agricultural Policy (CAP) documents, the NIS, MFP and NBR communiqués on the evolution of inflation prices, specialty literature which help to reduce the effects of the current crisis manifested also in agriculture.

For assessing the impact on pathway, were taken into account two hypotheses.

The first working hypothesis: rethinking the VAT rate level, on the chain producer - processor - retailer – consumer, by establishing differentiated VAT rates (reduced) on chain for farmers – the agricultural production users as raw materials, for retailers and that supported by consumer.

The second hypothesis: application of the second method of determination and settlement of VAT, by allowing agricultural production users to deduct VAT from the price paid to individual producers (associated), namely the calculation of VAT from 100 of price paid.

It keeps the principle of deductibility and of VAT management procedures.

## RESULTS AND DISSCUTIONS

### Analysis of the value added tax on chain

In Romania, VAT was introduced and implemented on 1 July 1993 as a form of harmonization with the EU tax system used. Currently applies 3 rates:

- standard rate of 24% (from 1 July 2010, compared to 19% practiced);
- reduced rate of 9% on the bread chain (wheat and flour) from September 1, 2013;
- two reduced rates of 9% and 5% to the consumer

Although since its introduction as a modern form of consumption tax, the base and the level of the tax rate and procedures have undergone several changes, they have not solved the budget income growth and the amount of revenue (cash) of individual farmers (associated), compared with the legal, creating more parallel markets:

- *peasant market* – on the relation individual producer (associated) - consumer;
- *regulated market* – on the relation legal farmers (companies, agricultural associations) - wholesalers - processors - retailers - consumer;
- *speculative market* – on the relation individual producers - wholesalers (merchants) not taxed (speculators) – consumer

The synthesis of VAT influences on chain in relation with the rate level and collection procedures, regularization and payment is shown in Tables 1 and 2.

Table 1

Specification	1) STANDARD TAX (24%)				2) REDUCED TAX (9%=5 %)					
	Agricultural producer	Processor	Retailer	Consumer	Producer	Processor	Retailer		Consumer	
							9%	5%	9%	5%
Cumulative price on chain*)	40	76	100	124	40 (52)	76			109	105
Costs on chain	36	32,4	21,6	-	36	32,4	21,6	21,6		
VAT collected	9,6	18,46	24	24**	9,6	18,46	9	5		
VAT deductible	4,75	13,86	21,31	(11,88)**	4,75	13,86	21,31	21,31	(11,88)**	(13,77)**
a) Afferent to merchandise	-	9,60	18,46		-	9,60	18,46	18,46		

Specification	1) STANDARD TAX (24%)				2) REDUCED TAX (9%=5 %)					
	Agricultural producer	Processor	Retailer	Consumer	Producer	Processor	Retailer		Consumer	
							9%	5%	9%	5%
b) Afferent to the cost on chain	4,75	4,28	2,85		4,75	4,28	2,85	2,85		
VAT chargeable	4,85	4,58	2,69	(12,12)**	4,85	2,69	-12,31	-16,31	(4,77)**	(-8,77)**
Theoretic degree of recuperation	43,55	21,84	11,21	50,50**						

\*) Data source: Own calculations – cumulative price also represents the share in the product/service price at the economic agents \*\*\*) – total on chain

Table 2

REVERSE CHARGE				OPTIONAL CHARGE	
Specification	Agricultural producer	Processor	Retailer	Consumer	The economic operators can now opt to be registered for VAT if they have a turnover of up to 220,000 lei (EUR 65,000). Moreover, operators with a turnover of up to 2,250,000 lei (€ 500,000) can make optional the payment of VAT on the receipt of goods or services.
Cumulative price on chain*)	40	76	100	124	
Costs on chain	36	32,4	21,6	-	
VAT collected	-	18,46	24		
VAT deductible		4,28	21,31	(11,88)**	
a) Afferent to merchandise	-	-	18,46		
b) Afferent to the cost on chain	4,75	4,28	2,85		
TVA – recuperated	4,75	-	-	(4,75)**	
TVA chargeable	(- 4,75)	14,18	2,69	(12,12)**	

Note: Own calculations – cumulative price also represents the share in the product/service price at the economic agents \*\*\*) – total on chain

The synthesis of VAT contribution due to the state budget is presented in Table 3.

Table 3

Specification	Standard VAT		VAT reduced		Reverse charge
	24%	19%	9%	5%	
Producer	4,85	3,84	4,85	4,85	-4,75
Processor	4,58	3,45	4,58	4,58	14,18
Commerce	2,69	2,30	-12,3	-16,31	2,69
TOTAL chain	12,12	9,59	-4,77	-8,77	12,12
Collecting degree	<b>50,50</b>	<b>50,50</b>	<b>-139,35</b>	<b>-172,23</b>	<b>50,50</b>

Source: own calculations

Conclusions: From the VAT rate of 24%, supported by consumer, only 50.50% (12.12 um) is VAT payable (chargeable) to budget. The difference is the deductible share, immobilized on the chain producer - processor - trader. In determining the indicators has been considered a profit rate of 10% and a share of inputs subject to VAT in price of 55%.

In the case of a profit of 15% and a 51% share of inputs, the gap between theoretic VAT and chargeable VAT (payment) is reduced from 49.5 to 43.3 which are closer to the EU's Economic Commission determined, of 42%, but well above the EU average of 17% and 97% of Sweden and 95% of Netherlands.

These data demonstrate that theoretic VAT and VAT collected by state are influenced of the rate of profit and the share of labor costs, procedures and mechanisms of managing VAT collected and deductible VAT on chain.

### VAT influence on individual farmer (without legal status)

The most affected by the current methodology and procedures for managing VAT is the individual producer that has no possibility in regularization of VAT paid afferent to inputs (seeds, fertilizers, herbicides and pesticides, feed, fuel and lubricants, spare parts, electricity and heat, other goods and services, as appropriate) to achieve agricultural production with VAT collected. In fact under the phrase „exempt from VAT” the agricultural producer is exempt from the quality of „fiscal agent” instead bears the expenses on VAT, thereby negating the character of neutrality. The synthesis of VAT influence is shown in Table 4

Table 4

Specification	S.C. – Agricultural associations	INDIVIDUAL PRODUCER			
		V1	V2	V3	V4
a) Inputs with VAT	55	55	55	44,3	55
b) TVA deductible	(13,2)	13,2	13,2	10,6	13,2
c) Other inputs (labour)	35	35	21,8	35	35
d) Total costs	90	103,2	90	90	113,2
e) Profit	10	-3,2	10	10	10
f) Producer price	100	100	100	100	123,2
g) TVA collected -24%	24	-	-	-	-
h) Amount invoiced	124	100	100	100	123,2
i) TVA chargeable (g-b)	10,8	-	-	-	-

Data sources: own calculations

To cancel the negative influences of the negative influence of the VAT, the farmer can do so:

V1 - apply the same technology. Although it can get a comparable production, VAT shall be charged at costs, it creates an unfair competition and he sells the production at a loss compared to commercial agricultural companies;

V2 - reduce spending on other inputs (wages, taxes, depreciation, interest, etc.) Does not guarantee the same profit;

V3 - reduce costs with VAT inputs (seeds, fertilizer, pesticides, mechanical works, fuels, lubricants, spare parts, other materials, etc.) Not guaranteed getting the same production and thus profit per unit of area.

V4 - sell the production on the open market at costs and get a profit (10% -15%). Not guaranteed production sale.

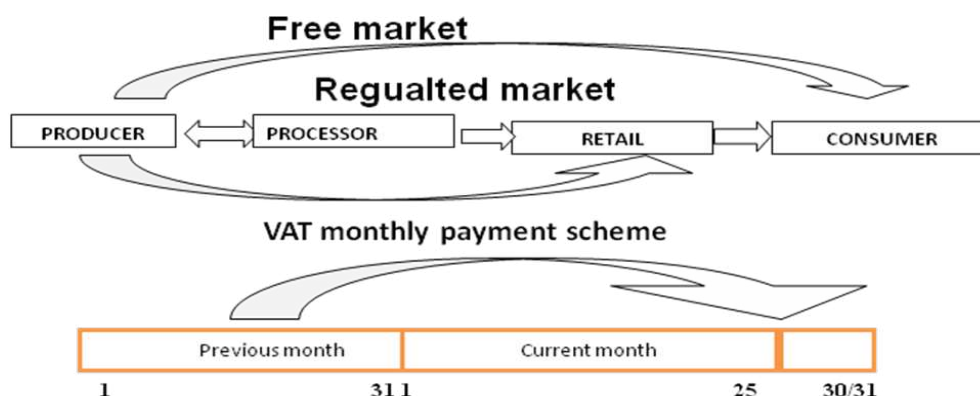
To remove the effects, the individual producer must join in legal form or to register as PFA (individual).

## The influence of VAT on retail trade

The **current system** of regulation and paying VAT chargeable (VAT collected - VAT deductible) to the state budget, on the 25th of the current month for the previous month (after 25 days) **turns VAT into fiscal credit**.

The movement of goods and services can be represented on graph as:

**Scheme 1: Movement of goods and services on chain**



Through the phenomenon of **“the snowball”**, after 4 days, the trader recovers the invested capital of 1 RON / euro. By the end of the month, he gets incomes of 634 lei / euro but until the payment of the chargeable VAT 100 730 lei / euro. Shopping malls, supermarkets, etc. reported turnover of over one billion euro / year, which is about 2.739 million euro / day. About 546 720 euros / day are drawn as the VAT amount collected, used to finance business.

To eliminate the negative effects of the VAT on the chain, we developed two hypotheses with several working options.

**I). The first working hypothesis:** rethinking the level of VAT rate on the chain producer - processor - retailer – consumer, by establishing differentiated VAT rates (reduced) on chain for farmers - agricultural production users as raw materials, for retailers and VAT paid by consumer.

**1). Radical version (V1, a):** Reduce the standard VAT rate from 24% to 19% for consumers and the optional use of the reduced rate of 9% on the chain producer-processor-retailer only on economic contract directly and without right of refund of VAT from the budget. It eliminates the reverse charge.

### Adjusting VAT: Radical version

Table 5

Specification		Producer	Processor (user)	Retailer	Consumer Total chain
1	VAT rate applied %	9	9	19	
2	Price cumulated on chain	40	76	100	119
3	Costs on chain	36	32,4	21,6	90
4	VAT collected	3,60	6,84	19	19 (100)
5	VAT deductible	1,78	5,2	7,91	4,45 (23,42%)
6	VAT chargeable (rows 4-5)	1,82	1,64	11,09	14,55 (76,58%)
7	Current VAT chargeable -	4,85	4,58	2,69	12,12
8	Differences (row 6– row 7)	-3,03	-2,94	+8,40	+2,43

Source: own calculations

**2). Moderate version (V.1b)** Reducing the VAT rate from 24% to 12% on the chain for goods and services purchased directly, based on contract and maintaining the VAT rate of 24% to consumer, with the results shown in Table 6.

### Adjusting VAT: Moderate version

Table 6

Specification	Producer	Processor	Retailer	Total chain
1. VAT rate on chain	12	12	24	-
2. VAT collected	4,8	8,4	24	24(100)
3. VAT deductible	3,76	8,19	11,68	9,71( 40,45)
4. VAT chargeable (row 2-3)	1,04	0,93	12,32	14,29(59,55)
5. Current VAT chargeable	4,85	4,58	2,69	12,12
6. Differences (4-5)	-3,81	-3,65	+9,63	+2,17( 17,%)

Source: own calculation

**3). Transient version (V3):** Setting VAT differentiated on sectors for goods and services purchased directly on contract, of 9% in the primary sector and agriculture and in manufacturing sector (processors) and maintaining current level of 24% for consumer, with the results shown in (table 7) as follows:

### Adjusting VAT: Transient version

Table 7

Specification	Producer	Processor (user)	Retailer	Total chain
1 VAT rate applied	15	19	24	
2 Price cumulated on chain	40 (52)	76,(48)	100	124
3 Costs on chain	36	32,4	21,6	-
4 <b>VAT collected</b>	6	14,44	24,00	24
5 <b>VAT deductible</b>	4,75	10,27	17,29	11,87(49,45)
6 <b>VAT chargeable (rows 4-5)</b>	<b>1,25</b>	<b>4,17</b>	<b>6,71</b>	12,13(50,55)
7 Current VAT chargeable	4,85	4,58	<b>2,69</b>	12,12
8 Differences (row 6– row 7)	-3,60	-0,41	4,01	+0,1

Source: own calculations; 58,74% of VAT chargeable is paid by retailers compared to about 23,13 % in present

### Synthesis of chargeable VAT contribution to the state budget (table 8)

Table 8

Specification	Current situation mUE/R/c.n rate 24 %	Versions proposed			
		V1		V2 15/15/24	V3 9/9/24
		a(9/9/19)	b(12/12/24)		
Agricultural produces	4,85	1,82	0,25	1,04	-1,15
Processor (user)	4,58	1,64	1,25	0,93	-1,03
Retailer Share from VAT chargeable	2,69 (22,19)	11,09 (76,22)	12,75 (87,93)	12,32 (86,21)	14,31(100)
<b>TOTAL chain</b>	<b>12,12</b>	<b>14,55</b>	<b>14,5</b>	<b>14,29</b>	<b>12,13</b>
<b>Theoretic collecting</b>	83/58/50,50	76,58	60,42	59,54	55,23
<b>Collecting gap</b>	<b>17 /42 /49,5</b>	<b>23,42</b>	39,58	40,46	44,77

Source: own calculations;

From the data presented, it results that all the proposed variants are superior to the current situation, noting that the most beneficial in their effects on both the operators and the consumer are those of V.1). This requires modification of domestic legislation with the EU and IMF permission. V3 operatives is more operative, although supposes to include the movement of goods and services between operators to the current share of 9%, it does not change the current rate of 24% to the consumer. Variant V2 is considering limiting the rate at 15% pursued by the EU as a unique rate.

**II. The second hypothesis:** application of the second method of determination and settlement of VAT, by entitling the users of agricultural production to deduct VAT from the price paid to individual producers (associated), namely calculate VAT from 100 price paid.

To counteract the negative results, we propose the following measures:

- a) Granting the right to deduct the VAT rate of the price paid to individual producers by the agricultural production users, organized as legal, with the right to deduct VAT and renounce at reverse charge of:
  - processing industry of vegetal and animal products for human consumption;
  - livestock and poultry units, for fodder;
  - gross markets, agricultural products purchase and storage wholesale centres;
- b) negotiation and circulation of agricultural products purchased from individual producers at prices with VAT included.
- c) generalization of „procurement slip” as document with special regime, for self-billing and VAT regulation, monitoring farmers' income.
- d) reduced rate must not be less than the deductible, thereby eliminating VAT refunds from the state budget.

Changing the current VAT treatment procedures at individual farmers ensures the production inclusion in the fiscal circuit, eliminates intermediaries and tax evasion, increases their income and efficiency, and reduces the pressure to subsidize agricultural production and agricultural contribution to the formation of budget revenues.

Other general and specific measures for agriculture:

- Establish an agricultural bank (on APIA structure or other structure);
- Setting up a temporary fund to support producer groups;
- Review the current conversion coefficients of the main agricultural products, as part of orientation in determining crop structure and negotiate prices.
- Include bank services in the circuit of economic operators that pay VAT by canceling their exemption from the Tax Code.
- Payment of chargeable VAT in two bank rates, as advance (60 %) until 10 of the month and regularization by 25-th of the current month for the previous month, in conjunction with the granting of a bonus to those who pay the full amount by 10 of the month.
- Increasing the role of the state and inter- professional organizations on agricultural products market.
- Increasing the role of civil society through NGOs, foundations, in drawing up laws and the control of the governance.

## CONCLUSIONS

- Improving the indicators of the state budget by increasing revenues and reducing spending on goods and services;
- Allocation of amounts made available to finance education, research and health;
- Improving the economic environment;
- Increased income of individual farmers;
- Stabilization of agricultural product markets by reducing prices, eliminating unfair competition, speculation and tax evasion;



- Reduce the pressure on MARD budget for subsidies for agriculture and increasing the share of agriculture to the state budget resources.

## BIBLIOGRAFIE

1. Toma, M. – Agricultura - sincopel tranziției, riscuri asumate, editura SC Tipografia Slobozia SA 2007;
2. Toma, M. – Cercetarea - sincopel tranziției, riscuri asumate, editura SC Tipografia Slobozia SA 2007;
3. Toma, M. - Contracurarea efectelor crizei. Reforma radicala a sistemului fiscal si contributiv. Agricultura, prima sansa. Cine, cum, cat, cu ce efecte? Editura: Terra Nostra” Iasi, 2009;
4. Toma, M. – Estimarea efectelor reducerii taxei pe valoarea adaugata pe filiera la paine; revista “Lumea satului nr 16 (189), 16-31 august 2013, Bucuresti;
5. Toma, M. – Inpactul TVA pe filiera, Revista “Agricultorul roman”. Nr. 11 (167) noiembrie 2012, Bucuresti;
6. \*\*\* Directiva 112, **Directiva 2006/112** a Consiliului Uniunii Europene din 28 noiembrie 2006 privind sistemul comun al TVA, publicată în Jurnalul Oficial al Comuñilor Europene (JOCE), Legea 347/11 decembrie 2006, cu modificările și completările ulterioare;
7. \* \* \* **Codul fiscal – Legea nr. 571/2003** (publicată în M.O. Nr. 927/28 decembrie 2003), cu modificările și completările ulterioare – TITLUL VI;
8. \* \* \* **Codul de procedură fiscală – OG. Nr. 92/2003** (republicat în M.O. Nr. 513/31 iulie 2007), cu modificările și completările ulterioare;
9. \* \* \* **Hotărârea Guvernului nr. 44/2004** pentru aprobarea normelor metodologice de aplicare a Legii nr. 57/2003 privind Codul fiscal, publicată în M.O. Nr. 112/6 februarie 2004, cu modificările și completările ulterioare (25 de rectificări).